

ORIGINAL CLAIMS

1. Self-locking osteosynthesis device of the type comprising a plate (1) which is equipped with holes (2) for the passage of fixation screws (3), characterized in that the plate (1) is made, in at least the zones (4) that define the passage holes (2) for the screws, of a material having the mechanical properties to allow a self-locking of the periphery of the holes by means of tapping screws that can be used for fixation of the plate.
2. Device according to claim 1, characterized in that the osteosynthesis plate (1) is comprised of a composite plate whose peripheries (4) of holes (2) are comprised of inserts made of a plastic biocompatible material, and inserted into the holes (6) provided in the remaining part of the plate made of metal.
3. Device according to claim 2, characterized in that the peripheries (4) of the holes (2) are comprised of inserts made of a high-performance thermoplastic polymer.
4. Device according to claim 3, characterized in that the peripheries (4) of the holes (2) are comprised of inserts made of polyether ether ketone (PEEK).
5. Device according to any one of the claims 1 to 4, characterized in that the passage holes (2) of the fixation screws (3) have a conical shape.
6. Device according to any one of the claims 2 to 5, characterized in that the remaining part of the plate or base plate (5) is made of titanium.
7. Device according to any one of the claims 2 to 6, characterized in that the inserts (4) comprising the periphery of the holes (2) are integrated in the remaining part of the plate or base plate (5) by molding from a casting.
8. Device according to any one of the claims 2 to 6, characterized in that the inserts (4) comprising the periphery of the holes (2) are integrated in the remaining part of the plate or base plate (5) by means of a mechanical assembly.
9. Device according to any one of the claims 1 to 8, characterized in that it also comprises tapping screws (3) comprising a proximal part or head (8) equipped with a conical threading tapping mechanism (9) having a diameter that increases in the direction of the proximal end of the screws.
10. Device according to any one of the claims 2 to 9, characterized in that it comprises a mechanism that prevents the rotation of the inserts (4) engaged in the holes (6) of the plate (5).